



Nemo SX - Modbus RS485 / Modbus TCP-IP Gateway

Cat. N°: SXIIP



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1. DESCRIPTION - USE

Modbus RS485 / Modbus TCP-IP Gateway.
Performs the Modbus RS485 / Modbus TCP-IP conversion to let the panel board's devices to be connected to an Ethernet network.

2. PRODUCT RANGE

Cat N° SXIIP: Modbus RS485 / Modbus TCP-IP Gateway, 230Va.c.

Width:

. 3 modules. 58,8 mm width.

Auxiliary supply:

. 90 ÷ 260 V~, 50/60 Hz

3. OVERALL DIMENSIONS



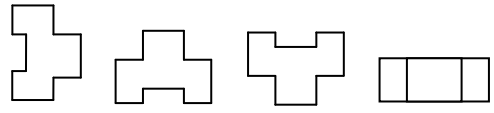
4. PREPARATION - CONNECTION

Fixing:

. On symmetrical EN/IEC 60715 rail or DIN 35 rail.

Operating position:

. Vertical Horizontal Upside down On the side



Screw terminals:

Terminal depth: 8 mm.
Stripping length: 8 mm

Screw head:

. Screw slotted.

Recommended tightening torque:

- . Power supply connector:
0,5 Nm
- . RS485 connector:
0,25 Nm

Recommended tools:

- . Power supply connector: Flat screwdriver 3,5 mm.
- . RS485 connector: flat screwdriver 2,5 mm
- . For fixing the device on the DIN rail: flat screwdriver 5.5 mm (from 4 to 6 mm).

4. PREPARATION –CONNECTION *(continued)*

Connectable section:

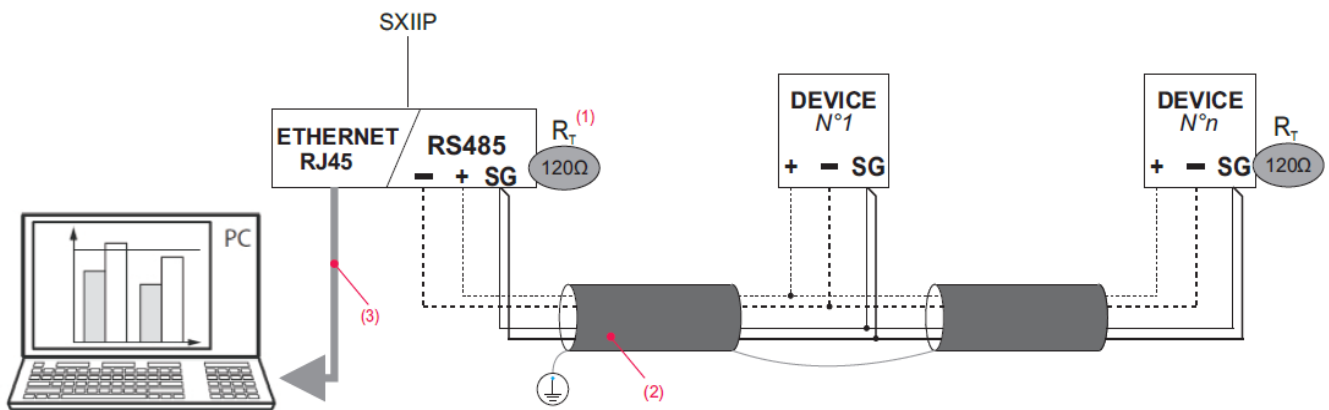
- . Copper cables.
- . Power supply connector

	Without ferrule	With ferrule
Rigid cable	Max. 1x4 mm²	-
Flexible cable	Max. 1x2,5 mm²	Max. 1x2,5 mm²

. RS485 connector

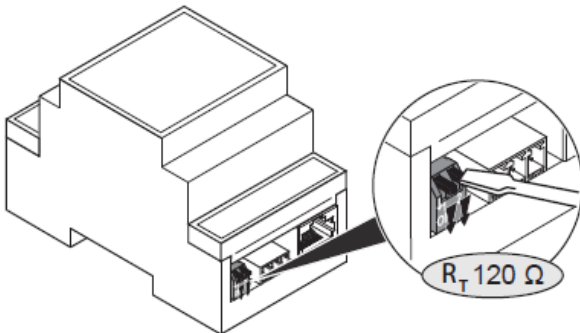
	Without ferrule	With ferrule
Rigid cable	Max. 1x2,5 mm²	-
Flexible cable	Max. 1x1,5 mm²	Max. 1x1,5 mm²

RS485 Wiring diagram:



(1) Termination resistance integrated

Insertion of the 120 Ω termination resistance (in the case in which the gateway is inserted at the ends of the RS485 bus):



(2) BELDEN 9842, BELDEN 3106A (or equivalent) max. 1000 m

Cat. 6 (FTP/UTP) max. 50 m

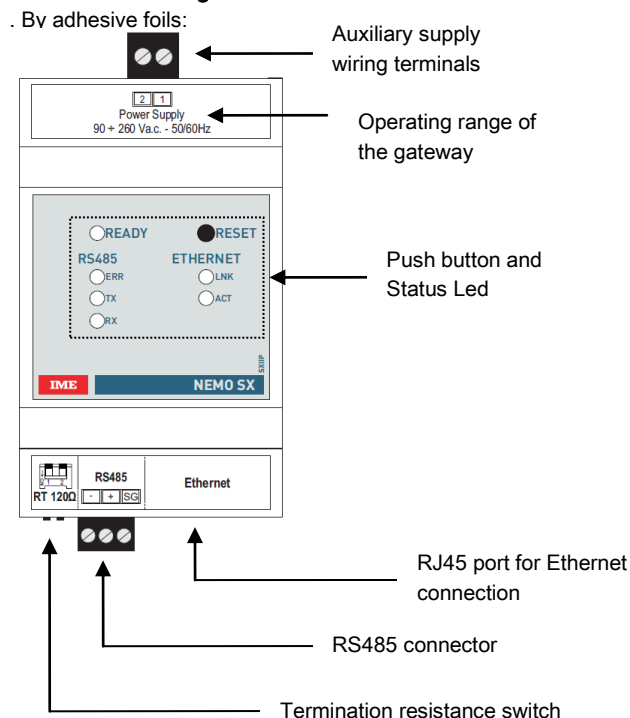
(3) Ethernet: Cat. 6 (FTP/UTP)

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5. GENERAL CHARACTERISTICS

Front face marking:



RS485 communication port's characteristics:

- . Baud rate: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps
- . Parity bit: none, even, odd
- . Stop bit: 1 or 2
- . Galvanically isolated respect to auxiliary supply
- . Standard RS485 3 wires (+, - and Signal ground), half-duplex
- . Protocol Modbus RTU or ASCII

Modbus default configuration:

- protocol Modbus: RTU
- baud rate: 19200 bps
- parity bit: even
- stop bit: 1
- RS485 timeout: 1000 ms

Modbus connectable devices:

- . Max. 32 Modbus devices

Ethernet specification compliance:

- . Ethernet specification compliance: IEEE 802.3 , EIA RS485
- . Interface Ethernet: RJ45; 10/100Mb

Ethernet default configuration:

- . IP Address: 192.168.1.100
- . Subnet Mask: 255.255.255.0
- . Gateway: 198.168.1.1

Web pages access:

- . Access to the web pages "Settings" and "Update" is secured by "Username" and "Password".

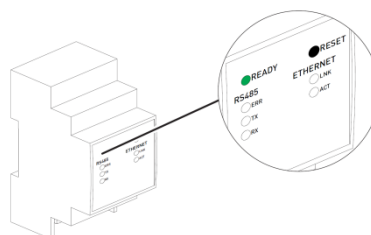
Default configuration:

- Username: customer.
- Password: 0000

5. GENERAL CHARACTERISTICS (continued)

Signalling LEDs:

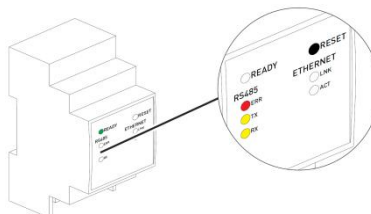
- . Gateway is equipped with several signalling LEDs:
- . Led "READY":



- . Possible states & colours:

Led	State	Meaning
READY	"green" Steady on	Device supplied
	"red" Steady on	Reset in progress (pressing RESET button longer than 10 sec.)

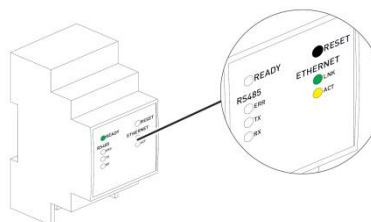
- . Led "ER", "TX", "RX":



- . Possible states & colours:

Led	State	Meaning
"ERR" (red)	Blinking	Error on the RS485 communicating bus
"TX" (yellow)	Blinking	Transmission data RS485 side
"RX" (yellow)	Blinking	Receive data RS485 side

- . Led "LNK", "ACT":

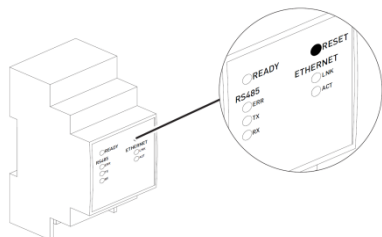


- . Possible states & colours:

Led	State	Meaning
"Link" (green)	Steady on	Device connected to the Ethernet network
"Act" (yellow)	Blinking	Data Receive / Transmission Ethernet side

5. GENERAL CHARACTERISTICS *(continued)*

Push-button "RESET" feature:



- . Push for at least 10s:
Reset the device with restoration of all default parameters

Ambient operating temperature:

- . Min. = -20°C. Max. = +60°C

Ambient storage temperature:

- . Min. = -40°C. Max. = +85°C

Enclosure material:

- . Self-extinguishing polycarbonate.
- . Heat and fire resistant according to IEC/EN 60695-2-12, glow-wire test at 960°C.
- . Classification UL 94 / IECEN 60695-11-10: V0

Protection Index:

- . Protection index of terminals against direct contacts: IP2X (IEC/EN 60529).
- . Protection index of terminals against solid and liquid bodies (wired device): IP 20 (IEC/EN 60529).
- . Protection index of the front face against solid and liquid bodies: IP 40 (IEC/EN 60529).
- . Class II, front panel with faceplate.

Consumption:

- . 2,94 VA (12,8 mA at 230 Va.c.)

Average weight per device:

- . 0,11 kg.

Volume when packed:

- . 0,6 dm³.

6. COMPLIANCE AND APPROVALS

Compliance to standards:

- . Compliance with Directive on electromagnetic compatibility (EMC) n° 2014/30/EU
- . Compliance with low voltage directive n° 2014/35/EU.
- . Electromagnetic Compatibility:
emission tests according to EN 61000-6-1 / EN 61000-6-2
immunity tests according to EN 61000-6-3 / EN 61000-6-4
- . Electrical safety: EN50428 (HBES)

Environment respect – Compliance with EU directives:

- . Compliance with Directive 2011/65/EU known as "RoHS 2" on the restriction of the use of certain hazardous substances in electrical and electronic equipment.
- . Compliance with REACH regulation: at the date of the publication of this document no substance from the candidate list is present in these products.

Plastic materials:

- . Halogens-free plastic materials.
- . Marking of parts according to ISO 11469 and ISO 1043.

Packaging:

- . Design and manufacture of packaging compliant to decree 98-638 of the 20/07/98 and also to directive 94/62/CE.